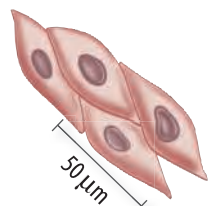


Nerve cells

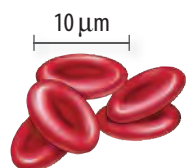
Nerve cells are very long and have a star shape at one end. The long shape of nerve cells helps them detect and send electrical messages through the body at the speed of a Formula 1 racing car. There are nerve cells all over your body. They allow you to detect touch, smell, taste, sound, light and pain.



Muscle cells

Muscle cells are long and elastic. Long thin cells can slide further over each other to allow you to move. There are

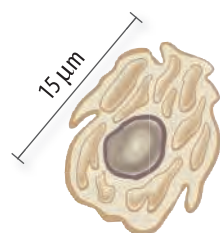
different types of muscle cells. The walls of your blood vessels and parts of your digestive system have 'smooth muscle' cells. The muscles that are joined to your bones are called 'skeletal muscles'. Skeletal muscles work in pairs — one muscle contracts (shortens) and pulls the bone in one direction while the other muscle relaxes.



Red blood cells

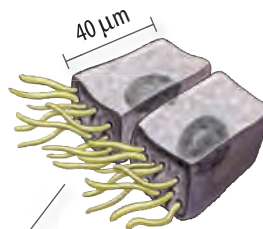
Red blood cells carry oxygen around the body. Their small size allows them to move

easily through blood vessels. The nucleus in a red blood cell dies soon after the cell is made. Without a nucleus, red blood cells live for only a few weeks. The body keeps making new blood cells to replace those that have died. Red blood cells are made in bone marrow at the rate of 17 million cells per minute! This is why most people can donate some of their blood to the Red Cross without harm. White blood cells, which are larger than red blood cells, are also made in the bone marrow. Their job is to rid the body of disease-causing organisms and foreign material.



Bone cells

Minerals such as calcium surround your bone cells. The minerals help make bone cells hard and strong. Bone cells need to be hard so that they can keep you upright.



Lung epithelial cells

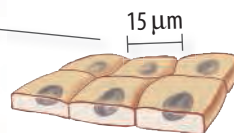
The cells that line your nose, windpipe and lungs are a type of lining cell. They have hair-like tips called cilia. These cells help protect you by stopping dust and fluid from getting down your windpipe. The cilia can also move these substances away from your lungs. You remove some of these unwanted substances whenever you sneeze, cough or blow your nose.



Adipose tissue cells

Some cells store fat. Fat stores a lot of energy for cells to use later. Round shapes are good for holding a lot of material in a small space.

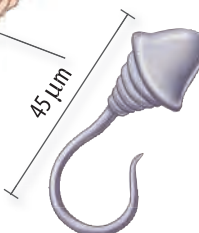
Fat cells are mostly found underneath your skin, especially in the chest, waist and buttocks.



Skin cells

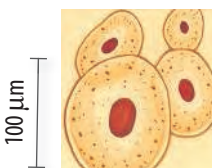
Special cells line the outside surfaces of your body. These are the cells that form

your skin. These cells have a flattened shape so they can better cover and protect your body.



Sperm cells

Sperm cells have long tails that help them swim towards egg cells. Only males have sperm cells.



Egg cells

Egg cells are some of the largest cells in a human body. Their large round shape helps them store plenty of food. Only females have egg cells. When a sperm cell moves into an egg cell, the egg cell is fertilised.

Organelles

Thousands or millions of molecules make up organelles. Each organelle has a particular job to do. Mitochondria, for example, are organelles in which the chemical energy in glucose is transformed into energy that our cells can use.

Cells

Just as bricks are the basic building blocks of a house, cells are the basic building blocks of all living things. Multicellular organisms are made up of many different types of cells, each with different jobs to do. Although these cells may have similar basic structures, they may differ in size, in shape and in the number and types of organelles that they contain.

Tissues

Groups of similar cells that carry out a specialised job are called **tissues**. Muscle tissue contains cells with many mitochondria so that the energy requirements of the tissue can be met. Nerve tissue consists of a network of nerve cells with extensions to assist in carrying messages throughout your body.

Organs

Organs are made up of one or more different kinds of tissue and carry out one (or sometimes more) main function or job. Our brain, ears, eyes and skin are examples of organs. Several organs working together make up a **system**.

